

## Virginia Department of Health Standards of Care: Tuberculosis Control Services

**QUALITY STANDARD:** Residents of the Commonwealth of Virginia who are diagnosed with confirmed or suspected active tuberculosis, or have signs and symptoms of tuberculosis, or exposure to a potentially infectious case of active TB can expect information, diagnosis, treatment, follow-up and referral through one of the thirty-five local health districts. Residents diagnosed with latent TB infection (LTBI) can expect, at a minimum, information and referral through one of the thirty-five local health districts in the Commonwealth. Services related to the diagnosis, treatment and follow-up of latent TB infection (LTBI) may be targeted only to high-risk populations and may vary by district.

The basis for the **core components of care** for these clients is outlined in:

1. Treatment of Tuberculosis. American Thoracic Society, Centers for Disease Control and Prevention, Infectious Diseases Society of America. MMWR 2003;52(No. RR-11).
2. Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection. Centers for Disease Control and Prevention. MMWR 2000;49(No. RR-6).
3. Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005. Centers for Disease Control and Prevention. MMWR 2005;54(No. RR-17).
4. Controlling Tuberculosis in the United States. Centers for Disease Control and Prevention. MMWR 2005;54(No. RR-12).
5. Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis. Centers for Disease Control and Prevention. MMWR 2005;54(No. RR-15).
6. Prevention and Control of Tuberculosis in Correctional and Detention Facilities: Recommendations from the CDC. Centers for Disease Control and Prevention. MMWR 2006;55(No. RR-9).
7. Virginia Tuberculosis Control Laws Guidebook. Virginia Department of Health, Division of TB Control, 2001. (Updated Treatment and Discharge Plan, 2005)
8. Essential Components of a Tuberculosis Prevention Program, MMWR Vol. 44 # RR-11, September 8, 1995.
9. Tuberculosis Nursing: A Comprehensive Guide to Patient Care, 1<sup>st</sup> Edition, National TB Controllers Association, 1997.
10. Tuberculosis Case Management for Nurses: Self Study Modules. New Jersey Medical School National Tuberculosis Center, 2001.

Any subsequent editions of these publications or directives and policies published by the Division of Disease Prevention, TB Control Program may supercede these recommendations and become the basis of care.

Clients utilizing TB Control Services will receive no less than the following care components that are considered **acceptable practice**:

### **Assessment**

**Both an assessment of TB Risk and a general health history will be completed for all clients according to VDH Division of Disease Prevention, TB Control Program Policy TB99-002.**

Clients will be screened as described in Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection. (MMWR 2000;49(No. RR-6)), pp. 7-10 and pp. 23-25, **and will receive appropriate examination and diagnostic testing** as defined in the same reference on pages 23-25, or as prescribed by the attending physician which in accordance with nationally published guidelines.

#### **At a minimum assessment will include:**

1. Site-specific signs and symptoms of tuberculosis disease
2. Risk of tuberculosis transmission, including degree and duration of infectiousness and identification of higher risk contacts
3. Tuberculosis risk factors
4. Previous and/or current anti-tuberculosis treatment
5. Results of examinations and diagnostic testing including but not limited to: Tuberculin skin test (TST) results, x-ray results, smear and culture results from sputum or other body/tissue sample, susceptibility results, HIV results, other laboratory results.
6. Socio-cultural factors associated with adherence
7. Differences in communication, beliefs and/or behaviors
8. Knowledge of tuberculosis infection and disease.
9. Assessment data collection is systematic, ongoing and is documented in a retrievable form.

The protocols for nutrition assessment will be based on the most recent recommendations by the Division of Chronic Disease or the most recent Dietary Guideline for Americans. The individual provider will determine elements of the physical exam. Normal parameters for physical exam elements are defined in the VDH Standards of Care: Normal Male/Female Adult Exam. Other client needs assessment will be performed according to the parameters described by the MMWR Essential Components of a Tuberculosis Control Program.

### **Intervention**

Nursing interventions should be undertaken to address the multiplicity and complexity of obstacles to treatment of those diagnosed with active tuberculosis disease. Clients with active tuberculosis disease require strategic planning and monitoring in order to achieve the ultimate goal of tuberculosis cure. Examples of areas requiring specific interventions include: management

of the therapeutic regimen, knowledge related to the disease process and mode of transmission, TB infection risk within the family and community, barriers to adherence, legal ramifications for non-adherence to treatment and isolation instructions. At a minimum the problems listed on the DDP-tb Service Plan should be assessed and actions to address the problems undertaken if applicable to the individual patient.

Treatment for those with active disease will generally follow the recommendations in the Treatment of Tuberculosis. (MMWR 2003;52(No. RR-11)) and should involve the client in decision-making regarding his/her care. An individualized treatment plan should be developed for each patient and be placed in the patient record. Records should also contain ongoing documentation of patient adherence. Actions needed to correct issues with patient adherence will follow the guidelines in the VA TB Laws Guidebook.

Preventive therapy for clients found to be infected but without active disease will follow the guidelines in the Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection. (MMWR 2000;49(No. RR-6)), pp. 14-19 that are appropriate for the client.

Contact investigation, including the examination and treatment of contacts, will follow recommendations presented in Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis. (MMWR 2005;54(No. RR-15)). Documentation of investigation and all follow-up of contacts should be entered on the Contact Investigation Log or similar electronic version. A summary report of the steps of the investigation and findings should be prepared for all large investigations such as those in a school or worksite.

Clients will be assessed for their learning needs regarding tuberculosis disease, adherence to the prescribed treatment plan, risk reduction, infection control, and treatment plans. Teaching intervention will be designed to meet identified client needs and will be based on Treatment of Tuberculosis. (MMWR 2003;52(No. RR-11)) and the VDH TB Service Plan.

The protocols for nutrition intervention are outlined in the most recent recommendations by the Division of Chronic Disease. Immunization services will be offered consistent with the VDH Immunization Manual guidelines.

Other client needs will be addressed as local resources permit in order to enhance treatment adherence.

### **Outcome Measures**

At least 90% of clients with active tuberculosis disease will complete treatment within 12 months. Acceptable variants are individuals diagnosed with multi-drug resistant tuberculosis and clients with neurological tuberculosis. Others may be considered acceptable on a case by case basis.

100% of clients with culture-positive, active pulmonary tuberculosis will have appropriate monitoring tests collected at appropriate intervals and will convert to culture negative within 90 days as evidenced by negative cultures on sputum collected on three separate days. Immediate

investigation will be undertaken for cases that do not have culture conversion to identify the cause.

The initial TB interview will be conducted within 3 days of the report for 95% of the reported TB cases/suspects.

At least 90% of newly reported AFB smear positive TB cases will have contacts identified and at least 95% of the contacts will be evaluated for disease and/or infection.

Contact investigation will be initiated within 3 days of first notification and completed within 3 months.

85% of contacts found to be infected with *Mycobacterium tuberculosis* infection or disease will complete a full course of recommended treatment.

90% of clients screened for latent TB infection (LTBI) for purposes other than contact investigation will complete required further evaluation for TB disease/infection.

60% of clients recommended for treatment of LTBI will complete the recommended course of treatment thereby reducing their risk of progression to active disease.

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